Special Provisions

Section 209.- BACKFILL

Section 209.11 (a) is supplemented with the following:

For live crib retaining wall, log terracing, willow walls and live gully repairs, compact each layer with an acceptable lightweight mechanical or manual compactor to a density acceptable to the CO.

Section 251.- RIPRAP

Description

Section 251.01 is amended with the following:

This work consists of furnishing and placing riprap for bank protection, slope protection, drainage structures, live crib retaining wall pads, and erosion control.

Construction Requirements

Section 251.03 **General.** is amended with the following:

Dress the excavated area to produce a smooth surface. Do not use geotextiles in the construction of a live crib retaining wall pad. Construct live crib retaining wall pads according to section 251.04.

Section 254.- CRIB WALLS

Description

Section 254.01 is amended with the following:

This work consists of constructing live crib retaining walls.

Material

Section 254.02 is replaced with the following:

Coconut mat	713.07(a)(3)
Crib wall backfill	704.12
Hardware for timber structures	716.02
Live branch cuttings	713.02 (f)(2)
Riprap	251 ## Janice to determine class
Untreated structural timbers	716.01

Section 254.03 **General.** is amended with the following:

Delete the last sentence in the first paragraph.

When the wall is constructed in an area inundated by ordinary high water, construct a pad of riprap, the base of which shall extend vertically from the riverbed to ordinary high water level. The riprap pad shall extend horizontally no more than 91.44 centimeters and no less than 30.48 centimeters beyond the cribwall base, according to the plans.

Section 254.04 **Erection.** is amended to read:

Furnish all necessary bolts, nuts, spikes, and hardware for complete assembly of the units into a continuous wall of connected units. Erect the crib wall according to the plans. Construct the wall to within 25 millimeters of and 3 meters from the lines and elevations shown on the plans.

(a) Live crib retaining wall. Construct live crib retaining walls according to Section 557, as amended.

Section 254.05 **Backfilling.** is supplemented with the following:

Backfill behind the cribs with cribwall backfill, according to Subsection 209.10.

Section 254.06 **Acceptance.** is amended to read:

Material for crib walls will be evaluated under Subsection 106.02 and 106.03.

Construction of live crib retaining walls will be evaluated under Subsections 106.04 and 106.04.

Survey work will be evaluated under Section 601.

Structure excavation and cribwall backfill will be evaluated under Section 209. See table 209-1 for minimum sampling data.

Live crib retaining walls will be evaluated under Section 557.

Section 557.- TIMBER STRUCTURES

Construction Requirements

Section 557.02 is amended to read:

Hardware	716.02

Painting	563
Treated Structural timber and lumber	716.03
Untreated structural timber and lumber	716.01
Untreated Log Pilings	715.04

Section 557.05 is replaced with the following:

Do not coat surfaces of wood materials for use in live crib retaining walls with preservatives.

Section 557.06 is amended to read:

Holes for Bolts, Dowels, Rods, Spikes, Rebar, and Lag Screws. Bore all holes for round driftbolts, spikes, and dowels 2 millimeters smaller than that of the bolt, spike, rebar, or dowel to be used.

Sections 557.08 - 557.22 are deleted.

Section 626.- PLANTS, TREES, SHRUBS, VINES, AND GROUNDCOVERS

Description

Section 626.01 is amended to read:

This work consists of furnishing and planting trees, shrubs, vines, ground covers, seedlings, cuttings, live branches, live stakes, brushlayers, rooted brushlayers, and live fascines in accordance with these Specifications and as shown in the Plans or as directed by the CO.

Construction Requirements

Section 626.03 is supplemented with the following:

For those plants identified on the Plans or in these Specifications as field collectible, the requirement to have a fibrous, cohesive root system shall be deleted.
Source plants for cuttings shall be dormant when cuttings are taken. All cuts shall be made with a sharp instrument. Cuttings exhibiting signs of torn or blemished bark from harvest, transport or handling activities will be rejected. Cuttings shall be planted between November 1 and March 31. All cuttings shall be planted immediately if buds begin to swell. All other planting shall be accomplished between November 1 and March 31.

Section 626.05 is supplemented with the following:

(c) Cuttings to be stored for periods between 12 hours and one week shall be stored by immersing in water with less than ¼ the total length exposed to air. Cuttings to be stored for periods between one week and four weeks shall be bundled and buried under 6 inches of moist soil with less than ¼ the total length of the budding end exposed to air. Cuttings stored from 30 days to 90 days shall be placed in cold storage in plastic bags at a temperature range of 0.9 to 4.5 degrees Celsius. Cuttings stored for

more than one week must be immersed in water with less than ¼ the total length of the budding end exposed to air for 24 hours just prior to installation.

Section 626.06 is supplemented with the following:

(3) For cuttings, live branches, live stakes, brushlayers, and live fascines, excavate according to dimensions shown on the plan sheets.

Section 626.07 is supplemented with the following:

Immediately remove and dispose of all rejected plant materials off site and replace with approved nursery stock or cuttings.

Paragraph two is deleted.

Subsections (a)- (c) are deleted.

Place all plant materials as shown in the plans. The Contractor shall exercise care when planting to ensure that the method of installation minimizes damage to plant material and to prevent damage to the root systems of the existing vegetation scheduled to remain.

When planting, each cutting shall have a minimum of two buds exposed above finish grade. Buds shall point upward, reflecting the natural orientation for growth.

Section 626.08 is supplemented with the following:

Delete all paragraphs and subsections.

Section 626.011 is supplemented with the following:

Delete the last sentence in the first paragraph.

Section 626.012 is supplemented with the following:

Delete the last sentence in the first paragraph.

Section 704.- SOIL

Section 704.10 Select Granular Backfill, is supplemented with the following:

Furnish sound, durable, granular material free from organic matter except soil amendments as noted in special provisions to 704.12 or other deleterious material (such as shale or other soft particles with poor durability).

Section 704.12 Crib Wall Backfill, is supplemented with the following:
Add one part compost to twenty parts select granular backfill.

(c) Conductivity, AASHTO ##	Soluable Salts 3mmhos/cm max.
(d) pH, AASHTO T 289	6.0 to 7.5.

Section 713.- ROADSIDE IMPROVEMENT MATERIAL

Section 713.06 is supplemented with the following:

Subsection (f) is replaced with the following:

(f) Mature Compost. Furnish compost products containing composted plant material derived from the aerobic decomposition of recycled plant waste. The composted plant waste shall have a moisture content that has no visible free water or dust produced when handling the material.

Compost shall be stable, mature, decomposed organic solid waste that is the result of the accelerated, aerobic biodegradation and stabilization under controlled conditions. The result is a uniform dark, soil-like appearance.

Compost maturity or stability is the point at which the aerobic biodegradation of the compost has slowed and oxygen consumption and carbon dioxide generation has dropped. Subsequent testing provides consistent results.

Compost products shall meet the following physical criteria:

100 percent shall pass through a 25 millimeter sieve when tested in accordance with AASHTO Test Method T87 and T88.

The pH range shall be between 5.5 and 8.5 when tested in accordance with WSDOT Test Method 417.

Manufactured inert material (plastic, concrete, ceramics, metal, etc.) shall be less than 1 percent on a dry mass or volume basis, whichever provides for the least amount of foreign material.

Minimum organic matter shall be 30 percent dry mass basis as determined by loss on ignition. (LOI test)

Soluble salt contents shall be less than 4.0 mmhos/cm.

Compost shall score a number 5 or above on the Solvita Compost Maturity Test.

Prior to delivery of compost, the Contractor shall supply one unused set of Compost Maturity Test kits, containing six tests, per item code #2261.

Additional kits may be requested by the CO when testing needs exceed supply. Unused test kit materials will be returned to the Contractor.

The Solvita Compost Maturity Test is available from:

Woods End Research Laboratory, Inc.
Box 297, Mount Vernon, Maine 04352
207-293-2457
E-mail: info@woodsend.org

Section 713.06 is supplemented with the following:

For those plants identified on the Plans or in these Specifications as field collectible (hereafter referred to as cuttings), the requirement to be nursery grown or Conform to the *American Standard for Nursery Stock* shall be deleted.

Section 713.06(a) is supplemented with the following:

Furnish cuttings from parent stock within the Nestucca River watershed. Written permission shall be obtained from property owners and provided to the CO before cuttings are collected. The Contractor shall collect cuttings in accordance with applicable sensitive area ordinances. Cut material shall not reduce the mass of any individual parent plant by more than 1/3 unless the plants are in an area to be cleared and grubbed or the Contractor has the owners permission.

Section 713.06 is supplemented with the following:

(f)Cuttings forms. Cuttings have no previously developed root system, are cut live from specified plant species and are planted before they root. They include the following forms:

(1) Live stake cuttings. Live stake cuttings shall have a straight top cut immediately above a bud. The lower, rooting end shall be cut at a 45 degree angle. Live stakes have no branches and no leaves, are cut from 1 to 2 year old wood, and are less than 6.35 centimeters in diameter.

(2) Live branch cuttings. Live branch cuttings shall be bushy, flexible top growth with terminal buds, are less than 4 centimeters in diameter, and may have side branches, but all leaves must be removed.

Section 713.06 is amended to read:

(3) Type 3 – Coconut mat. Furnish a mat consisting of coconut coir and synthetic polypropolene fibers or other approved yarn woven into

a plain weave mesh with approximately 16 to 20 – millimeter square openings. Conform to Table 713-4.

Section 716.is supplemented with the following:

(h) Untreated log pilings. Timber (log) piling shall be untreated.

Timber (log) piles shall have the following limiting diameters:

Length in Meters	Min. Butt Dia. 1 meter above Butt in Millimeters	Max. Butt Dia. 1 meter above Butt in Millimeters	Min. Tip Dia. in Millimeters
Under 12	305	510	175
12-16.5	305	510	175
17-22.5	330	510	175
Over 22.5	355	510	175

Except where specifically provided otherwise, untreated timber (log) piling shall be Douglas fir, Western red cedar, or larch. Piling for foundations shall be Douglas fir. Piling shall be cut from sound, live trees and shall contain no unsound knots. Sound knots will be permitted, provided the diameter of the knot does not exceed 100 millimeters, or 1 /3 of the small diameter of the pile at the point where they occur, whichever is smaller. Any defect or combination of defects which will impair the strength of the pile more than the maximum allowable knot will not be permitted. Piling shall be cut above the butt swell and shall have a uniform taper from butt to tip. A line drawn from the center of the tip to the center of the butt shall not fall outside the center of the pile at any point more than one percent of the length of the pile. A spiral grain or twist in excess of 1 /4 turn in 3 meters of length will be cause for rejection.

Untreated timber trestle piling shall have an average of at least five annual rings per 25 millimeters measured radially over a distance of 75 millimeters at the butt, beginning at a point 85 millimeters from the heart. At least 225 millimeters of heartwood shall show at the butt.

Ring count requirements for untreated timber foundation piling and detour trestle piling will be waived.

Section 713.08 is supplemented with the following:

(h) Inoculants. Inoculants for use in pre-rooted brushlayers shall contain live endo and ectomycorrhizal fungi, plant biostimulants and water absorbent polymers meeting the following typical requirements:

Endomycorrhizal Fungi	Minimum 50,000 live spores of Vesicular arbuscular (VA) fungi per pound of product to include Entrephospora columbiana, Glomus etunicatum, Glomus Clarum and Glomus sp.
Ectomycorrhizal Fungi	Minimum 140 million live spores of Pisolithus tinctorius per pound of product.
Biostimulants	Dry soluble yucca extract (Yucca schidigera); soluble sea kelp extract (Ascophylum nodosum); and humic acids (natural humates).
Water absorbent polymers	0.2 to 0.8 mm sized particles of polyacrylamide copolymer.